

LISTING OF CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-40. (canceled)

41. (previously presented) A method for creating a highly connected network of nodes indicative of computer-readable data, including the steps of:
capturing data contained in at least one legacy database; and
structuring the captured data as a set of linked nodes, wherein each of the nodes includes at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, viewed from said point of view.

42. (previously presented) The method of claim 41, wherein the nodes have identical structure but at least some of the nodes have different content.

43. (previously presented) A method for creating a highly connected network of nodes indicative of computer-readable data, including the steps of:
capturing data contained in at least one legacy database;
structuring the captured data as a set of linked nodes, wherein each of the nodes includes at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations;
designating one of the nodes as the point of view; and
displaying said representations of the nodes as said sea of node representations, viewed from said point of view.

44. (previously presented) The method of claim 43, wherein said sea of node representations includes virtual reality renderings.

45. (previously presented) A method for creating a highly connected network of nodes indicative of computer-readable data, including the steps of:
capturing data contained in at least one legacy database;

APPENDIX

structuring the captured data as a set of linked nodes, wherein each of the nodes includes at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations; and

implementing a query, said step of implementing the query including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines the query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and deemphasizes information having less relevance to the query.

46. (previously presented) The method of claim 45, wherein step (c) is performed in a manner that is tolerant to imprecision and errors in the query.

47. (previously presented) The method of claim 45, wherein the command specifies key words, and step (c) is performed in such a manner that the changed sea of node representations facilitates access to relevant data containing none of the key words.

48. (previously presented) The method of claim 45, wherein step (c) is performed in such a manner that the changed sea of node representations facilitates finding of data that is similar to known data, without specifying characteristics of said data that is similar to known data.

49. (previously presented) A method for interactively exploring, accessing, and visualizing information in a highly connected network of nodes, said method including the steps of:

determining a set of linked nodes, each of the nodes including at least one link to another one of the nodes, wherein the set of linked nodes is structured such that representations of the nodes can be displayed as a sea of node representations; and

designating one of the nodes as a point of view, linking a number of the nodes directly to the point of view, and calculating individual link distances

APPENDIX

from each of at least some of the nodes to the point of view, thereby determining a hierarchical network of the nodes which is amenable to visualization.

50. (previously presented) The method of claim 49, wherein there are cyclic loops in linkages between at least some of the nodes directly and the point of view.

51. (previously presented) The method of claim 49, also including the step of:

adding or deleting at least one link of at least one of the nodes, thereby changing the hierarchical network.

52. (previously presented) The method of claim 49, also including the step of:

displaying representations of the nodes as a sea of node representations, viewed from said point of view.

53. (previously presented) The method of claim 49, wherein the hierarchical network of the nodes determines a connection strength of each of a set of linkages between at least some of the nodes, and a magnitude of each of at least some of the nodes, and wherein position and size of each of the nodes in said visualization is determined in accordance with each said connection strength and magnitude.

54. (previously presented) The method of claim 49, wherein said sea of node representations includes virtual reality renderings.

55. (previously presented) The method of claim 49, wherein each of the nodes has a node type, each of said link distances is determined by a function of the number of links between a pair of the nodes and the node type of each node of said pair, and the hierarchical network has a hierarchical tree structure.

56. (previously presented) The method of claim 49, also including the step of:

implementing a user interface which displays representations of at least some of the nodes, wherein the user interface allows emulation of application programs by linking appropriate ones of the nodes.

57. (previously presented) The method of claim 49, also including the step of:

implementing a user interface which displays representations of at least some of the nodes, wherein the user interface implements a simple command and query syntax which is amenable to a voice interface.

58. (previously presented) A method, including the steps of:

structuring computer-readable data as a set of linked nodes, wherein each of the nodes includes at least one link to another one of the nodes, each of the nodes has a name associated therewith, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, viewed from said point of view; and

maintaining information specific to each of the nodes, including by maintaining the name of each of the nodes such that each said name is searchable and retrievable.

59. (previously presented) The method of claim 58, wherein the information specific to each of the nodes, includes a magnitude and connection strength of a link between said each of the nodes and at least one other one of the nodes.

60. (previously presented) A method for associating linked nodes, wherein each of the nodes contains computer-readable data, at least one link to another one of the nodes, and a link identification for each event which links said each of the nodes to another one of the nodes, and wherein the linked nodes are structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

storing, in a context node, a meaningful context common to a set of the nodes, wherein the context node is linked to each of the nodes in the set; and

sharing a single link identification among the nodes in said set, thereby associating the nodes that are identified by said single link identification.

APPENDIX

61. (previously presented) The method of claim 60, also including the step of modulating a connection strength of the links that are identified by said single link identification, thereby sensitizing or desensitizing said links to further operations.

62. (previously presented) A method of establishing a set of linked nodes from data organized in rows and columns with column headings, wherein each of the nodes includes at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, viewed from said point of view, said method including the steps of:

- representing each of the column headings by an abstract node;
- representing each cell of the data by a data node;
- establishing links between each said abstract node and each said data node that corresponds to a cell in a column whose column heading is represented by said abstract node; and
- establishing links between each said data node that corresponds to a cell in one of the rows.

63. (previously presented) A method of establishing a set of linked nodes from files linked by HTML references, wherein each of the nodes includes at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

- establishing data nodes, each of the data nodes representing each of the files;
- establishing links from said data nodes to terms found in the files.

64. (previously presented) The method of claim 63, wherein each of the terms is one of a set of selected tag values such as meta-tags or heading values.

65. (previously presented) The method of claim 63, also including the step of:

establishing links to abstract nodes representing suffixes of the files.

66. (previously presented) A method of establishing a set of linked nodes from files from a computer file system, wherein each of the nodes includes at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the step of:

establishing links between data nodes representing a file directory and data nodes representing files or sub-directories in the file directory.

67. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and displays but deemphasizes information having less relevance to the query.

68. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the

query and deemphasizes information having less relevance to the query, wherein step (c) includes the step of:

tracing backwards from a target node to the first point of view by following all links from the target node to intermediate nodes having lesser magnitude, and displaying representations of said intermediate nodes.

69. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and deemphasizes information having less relevance to the query, wherein each of the node representations is displayed in a position that depends on parameter values of the corresponding node, and wherein step (c) includes the step of:

gradually changing the displayed position of at least one of the node representations, thereby showing a transition between an initial state and a final state of said one of the node representations.

70. (previously presented) The method of claim 69, wherein step (c) includes the step of:

operating on parameters indicative of pushing or pulling of the displayed position of said at least one of the node representations relative to displayed positions of others of the node representations.

71. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

APPENDIX

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and deemphasizes information having less relevance to the query, wherein step (c) includes the step of:

traveling distally and upstream from a target node, finding the first abstract node linked to the target node and emphasizing a displayed representation of said first abstract node, thereby abstracting the target node.

72. (previously presented) The method of claim 71, wherein step (c) also includes the step of:

abstracting the target node at a higher level, by traveling from said first abstract node to directly linked abstract nodes which are both distal to and upstream of said first abstract node.

73. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and deemphasizes information having less relevance to the query, wherein step (c) includes the step of:

emphasizing displayed representations of abstract nodes linked to a target node which have not been recently visited by a query operation.

74. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at

least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and deemphasizes information having less relevance to the query, wherein step (c) includes the step of:

magnifying displayed representations of nodes based on similarity of each of the nodes to a chosen node, by magnifying displayed representations of data nodes linked to at least some of a set of abstract nodes linked to the chosen node.

75. (previously presented) A method for retrieving data of interest from a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

(a) establishing a first point of view and displaying said representations of the nodes as a first sea of node representations whose point of view is said first point of view;

(b) invoking a command which determines a query; and

(c) in response to the command, displaying a changed sea of node representations which emphasizes information having greater relevance to the query and deemphasizes information having less relevance to the query, wherein step (c) includes the step of:

modifying a potentiation parameter of at least one of the nodes.

76. (previously presented) A method of displaying node representations indicative of a network of linked nodes, wherein each of the nodes includes data and at least one link to another one of the nodes, and the set of linked nodes is structured such that when one of the nodes is designated as a

APPENDIX

point of view, representations of the nodes can be displayed as a sea of node representations, said method including the steps of:

designating one of the nodes as the point of view; and

displaying said representations of the nodes as said sea of node representations, viewed from said point of view, with visual emphasis assigned to each of the node representations dependent on parameters of each of the nodes, said parameters including connection strength of a link between said each of the nodes and at least one other one of the nodes.

77. (previously presented) The method of claim 76, wherein said parameters also include polarization of the link between said each of the nodes and at least one other one of the nodes.

78. (previously presented) The method of claim 76, wherein said parameters also include the minimum number of links between said each of the nodes and at least one other one of the nodes.